

WILDLIFE HABITAT EVALUATION GUIDES -COLORADO-

The attached Habitat Evaluation Guides provide the SCS planner with a relatively easy and objective means of determining the value of wildlife habitat on any planning unit. The planning unit may consist of a field, tract, or an entire farm. The planning unit will be referred to as a Conservation Treatment Unit (CTU). The guides can be used on land where managing for wildlife is a primary objective, or on land (such as cropland) where wildlife is a secondary objective. Boundaries of a CTU for wildlife evaluations may coincide with those delineated for cropland, rangeland, pasture/hayland, or woodland; or a wildlife CTU may be delineated that includes two or more land uses. If a CTU is predominantly one land use, (for example, cropland with grassy irrigated corners and fence rows), the unit may be evaluated only for the predominant land use. There is no minimum size limit for evaluation of a land use. For example, a farmstead windbreak could be evaluated as woodland if the producer's goal is to improve wooded habitat.

The guides are based on the following assumptions:

1. For many SCS planning situations involving wildlife, improving habitat diversity will improve wildlife habitat.
2. All land provides habitat for wildlife.
3. The quality of habitat is variable depending on the quality, quantity and interspersions of food, water, cover, and space.
4. We can measure habitat variables and compare them to optimum conditions.
5. Wildlife populations are proportional to the quantity and quality of habitat.

The guides can be used to determine if a CTU meets the minimum quality standard for wildlife found in Section III, Field Office Technical Guide (FOTG), for wildlife in a Resource Management System (RMS). The guides can help identify conservation practices and management measures that can be used to meet the RMS standard or to meet the habitat quality objective of the landowner. These guides are not to be used to evaluate the potential for introducing a species not presently found on the CTU.

The guides use a numerical rating to compare the value of existing wildlife habitat with the value of wildlife habitat under various alternatives. They are based on the idea that diversity is beneficial for many commonly encountered wildlife species. The guides have been developed to consider the needs of a variety of species using a particular land-use/cover type. They were not developed to evaluate the habitat quality for any particular species or for wildlife specialists (species with a very narrow range of habitat needs). Thus, complete habitat needs or home range requirements for a particular species may not be reflected in the guides. The cropland guide, for instance, helps to evaluate habitat for species that normally inhabit cropland, not just pheasants.

If a landowner is interested in improving or managing habitat for a particular species, an animal guide or Technical Note for that species or a species-specific habitat model may be used. To date, few species-specific habitat models have been developed for the West. If you have a need for a species-specific model, contact the Area or State Biologist.

Instructions for use of the guides:

1. Determine the landowner's objectives with regard to his/her overall conservation program, wildlife, specific practices he/she wishes to apply, etc. Is the land to be managed primarily for wildlife or cropland, or both? Does he/she wish to increase wildlife populations or maintain present populations?
2. Based on the landowner's or your knowledge of the area, what wildlife species (game or non-game) are present in the area? Are threatened or endangered species present (See 190 General Manual Part 410.22) or other species that require special attention (for example, sage grouse)? You may have to refer to the literature or consult with an SCS Biologist or Colorado Division of Wildlife representative.
3. All fields evaluated should be numbered on the plan map and identified on the appropriate evaluation worksheet.
4. Refer to the published Soil Survey or Section II of the FOTG, Soil Interpretations Records, to find the wildlife habitat potential and plant interpretations for the soils you are dealing with.
5. Rating the habitat quality and quantity is best done in the field with the landowner. Evaluate the habitat based on what would be expected under normal, mid-growing season conditions. Enough of the CTU should be visited, referred to on the aerial photo and discussed with the landowner to accurately evaluate habitat condition. Keep in mind that this is a guide. When you encounter situations not specifically covered, use your judgement to rate that factor. Any rating between 0.0-1.0 is acceptable. If a factor is beyond the lowest listed rating, a 0.0 for that factor is appropriate. All 0.0 ratings should be counted in the total number of inventory factors rated. If you feel a factor does not apply, you may adjust the guide to rate only factors evaluated. If no rating is given for a factor, be sure to adjust the number of factors inventoried. The guides can be completed while collecting other resource data such as range condition, woodland site index, USLE information, etc.
6. After the total habitat value has been determined, look back through ratings to find those factors that could be improved. Compare those deficient factors with the soil interpretation. For example, if on a cropland CTU you arrive at a rating of 0.0 or 0.1 for woody vegetation, refer to the soils/wildlife and plant interpretations to find the potential for shrubs, hardwoods, and coniferous plants.
7. With the landowner, develop alternatives for improving deficient factors. A conservation cropping system may improve cropland quality. A small clear-cut of "mature" timber may be used to create a forest opening. A planned grazing system will not only improve the rating for that factor, but may in time lead to improved range condition. A stock pond will provide drinking water for wildlife as well as livestock. Field borders, windbreaks, filter strips, and shelterbelts improve diversity in cropland and/or pasture/hayland while providing erosion protection.
8. For additional information refer to animal guides, plant guides, job sheets and the FOTG for specifics on what to do and how to do it. Contact the Area or State Biologist if you have questions or comments.

Wildlife Habitat Evaluation Guide
CROPLAND HABITAT

Field No. _____

1. Landowner objectives:
2. Wildlife commonly found on this conservation treatment unit:
3. Soils potential for cropland habitat elements:

4. Habitat Inventory	RATING
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a. Cropland Quantity and Quality	a. _____
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Percent of CTU in cropland:

30-59%	= 1.0
15-29% or 60-89%	= 0.5
1-14% or 90-100%	= 0.3

Deduct 0.5 points for heavy fall tillage (e.g., moldboard plow), burning, grazing, or other destruction of crop residue.

Deduct 0.3 points for crops other than grain or seed production.

Deduct 0.3 points for heavy use of herbicides and/or insecticides.

Grains grown as cover or nurse crops should be considered cropland.

No rating <0.2, if cropland is present in any quantity.

b. Herbaceous Vegetation Quantity and Quality	b. _____
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Percent of CTU with herbaceous vegetation:

15-60%	= 1.0
10-14% or 61-100%	= 0.5
0-9%	= 0.3

Deduct 0.3 points for moderate grazing, haying or herbicide application.

Deduct 0.5 points for heavy grazing, burning, herbicide application, etc.

Add 0.3 points if tall (>18") perennial herbaceous vegetation is predominantly in strips >20 ft. wide.

No rating <0.2 if herbaceous vegetation is present in any quantity.

c. Woody Vegetation Quantity and Quality c. _____

Percent of CTU with woody vegetation:

15-59% = 1.0

5-14% or 60-95% = 0.5

0-4% or 96-100% = 0.3

Deduct 0.3 points for moderate grazing or herbicide application.

Deduct 0.5 points for heavy grazing, burning herbicide application, etc.

Higher rating should be given if vegetation is predominantly in strips.

No rating <0.2 if woody vegetation is present in any quantity.

d. Interspersion of Vegetation Types d. _____

Average distance between vegetation types <200' = 1.0

Average distance between vegetation types from 200'-800' = 0.5

Average distance between vegetation types >800' = 0.3

Different vegetation types are areas that visually appear to be dominated by different plant species i.e. pinon-juniper woodland vs. sagebrush or a row crop field vs. a hay field. Different crops (wheat vs. corn) are not considered different vegetation types.

e. Human Disturbance e. _____

Infrequently used private roads, 0 occupied dwellings per CTU, urban development at least 1 mile away. = 1.0

Frequently used private roads, 1 occupied dwelling per CTU, urban development within 1/2 mile. = 0.5

CTU <40 acres, contains 2 or more occupied dwellings or frequently used roads, urban development within 1/4 mile. = 0.3

f. Wildlife Drinking Water f. _____

If perennial drinking water is present, or developed to raise habitat value, rate as follows:

Average distance to water from any point on CTU <1/4 mile. = 1.0

Average distance to water from any point on CTU from 1/4 mile to 1/2 mile. = 0.5

Average distance to water from any point on CTU >1/2 mile to 1 mile. = 0.3

Deduct 0.3 points for any grazing, cultivation, burning, or pesticide use within 50 feet of drinking water source.

No rating <0.2 if average distance is <1 mile.

5. Habitat Value

$$\text{Habitat value} = \frac{\text{Total Rating}}{\text{No. of inventory factors rated}} = \underline{\hspace{2cm}}$$

6. Habitat elements needing improvement and the soil potential for those elements:

7. Alternatives for improving deficient habitat elements:

Wildlife Habitat Evaluation Guide
PERMANENT PASTURE/HAYLAND HABITAT

Field No. _____

1. Landowner objectives:
2. Wildlife commonly found on this conservation treatment unit:
3. Soils potential for pasture/hayland habitat elements:

4. Habitat Inventory RATING

- a. Pasture/Hayland Quantity and Quality a. _____

Percent of CTU in Pasture/Hayland	
30-59%	= 1.0
15-29% or 60-89%	= 0.5
1-14% or 90-100%	= 0.3

Deduct 0.3 points for any late fall or spring (prior to July 1) mowing.

Deduct 0.5 points for unmanaged or heavy grazing, frequent burning or other destruction of vegetation.

Deduct 0.3 points for heavy use of herbicides and/or insecticides.

No rating <0.2, if pasture/hayland is present in any quantity.

- b. Cropland Quantity and Quality b. _____

Percent of CTU in cropland	
20-40%	= 1.0
10-19% or 41-65%	= 0.5
<10% or >65%	= 0.3

Deduct 0.3 for fall tillage, burning, heavy grazing, herbicide use, or other destruction of crop residues.

- c. Herbaceous Vegetation other than Pasture/Hay crop. c. _____

Percent of CTU with mix of grass-legume vegetation other than pasture or hay crop (examples include grasses and forbs other than those in the pasture/hay seeding mixture) :

46-100%	= 1.0
20-45%	= 0.5
0-19%	= 0.3

Deduct 0.3 points for moderate grazing or herbicide use.

Deduct 0.5 points for heavy grazing, burning, herbicide application, etc.

Add 0.3 points if tall (<18") vegetation in field border or strips and vegetation provides winter cover (remains standing in snow) or spring nesting cover.

No rating <0.2, if herbaceous vegetation is present in any quantity.

d. Woody Vegetation Quantity and Quality d. _____

Percent of area with woody vegetation:

30%-59%	= 1.0
15-29% or 60-95%	= 0.5
0-14% or 96-100%	= 0.3

Deduct 0.3 points for moderate grazing

Deduct 0.5 points for heavy grazing, burning, herbicide application, etc.

No rating <0.2 if woody vegetation is present in any quantity.

e. Interspersion of Vegetation Types e. _____

Average distance between vegetation types <200' = 1.0

Average distance between vegetation types from 200'-800' = 0.5

Average distance between vegetation types >800' = 0.3

f. Human Disturbance f. _____

Infrequently used private roads, 0 occupied dwellings in CTU, urban development at least 1 mile away = 1.0

Frequently used private roads, 1 occupied dwelling per CTU, within 1/2 mile of urban development = 0.5

CTU < 40 acres, contains 2 or more occupied dwellings or frequently used roads, within 1/4 mile of urban development. = 0.3

g. Wildlife Drinking Water g. _____

If perennial drinking water is present, or developed to raise habitat value, rate as follows:

Average distance to water from any point on CTU <1/4 mile = 1.0

Average distance to water from any point on CTU from
1/4 - 1/2 mile = 0.5

Average distance to water from any point on CTU from
> 1/2 - 1 mile = 0.3

Deduct 0.3 points for any grazing, cultivation, burning, pesticide use within 50 feet of drinking water source.

No rating <0.2 if average distance is <1 mile.

5. Habitat Value

Habitat Value = $\frac{\text{Total Rating}}{\text{No. of inventory factors rated}}$ = _____

6. Habitat elements needing improvement and the soil potential for those elements.

7. Alternatives for improving deficient habitat elements:

Wildlife Habitat Evaluation Guide
RANGELAND HABITAT

Field No. _____

1. Landowner Objectives:
2. Wildlife commonly found on this CTU:
3. Soil potential for rangeland habitat elements:

4. Habitat Inventory

RATING

a. Ecological Condition

a. _____

Excellent or Good	= 1.0
Fair	= 0.5
Poor	= 0.3

b. Grazing System

b. _____

Livestock use follows a planned grazing system	= 1.0
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Ungrazed with buildup of dead plant material = 0.7

Moderate, season-long use with or without planned grazing system	= 0.5
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Overgrazed, with or without planned grazing system	= 0.3
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c. Interspersion of Vegetation Types

c. _____

Average distance between vegetation types from 660-950'	= 1.0
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Average distance between vegetation types from 520-659' or 951-1150'	= 0.5
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Average distance between vegetation types from 250-519' or > 1150'	= 0.3
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Average distance between vegetation types <250'	= 0.1
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Different vegetation types are areas that visually appear to be dominated by different plant species i.e. pinon-juniper woodland vs. sagebrush.

d. Human Disturbance d. _____

Infrequently used private roads, 0 occupied dwellings in CTU,
urban development at least 1 mile away = 1.0

Frequently used private roads, 1 occupied dwelling per CTU,
within 1/2 mile of urban development = 0.5

CTU <40 acres, contains 2 or more occupied dwellings or
frequently used roads, within 1/4 mile of urban development = 0.3

e. Wildlife Drinking Water e. _____

If perennial drinking water is present or developed to raise habitat value,
rate as follows:

Average distance to water from any point on CTU <1/2 mile = 1.0

Average distance to water from any point on CTU from
1/2 to 1 mile = 0.5

Average distance to water from any point on CTU
>1 to <2 miles = 0.3

Deduct 0.3 points for any grazing, cultivation, burning or pesticide
use within 50 feet of drinking water source.

No rating <0.2 if average distance is <2 miles.

f. Plant Communities f. _____

Number of different plant communities on the CTU:

4 or more plant communities = 1.0

2-3 plant communities = 0.5

1 plant community = 0.3

Plant communities are areas of the same dominant plant species.

5. Habitat Value

Habitat value = $\frac{\text{Total Rating}}{\text{No. of inventory factors rated}}$ = _____

6. Habitat elements needing improvement and the soil potential for those elements:

7. Alternatives for improving deficient habitat elements:

CRP ADDENDUM TO RANGELAND WHEG

One of the two following options may be used for native CRP plantings (e.g. CP-2) in lieu of inventory factor 4b when using the Rangeland Habitat WHEG.

1) You may choose to skip factor 4b for CRP because evaluating the effects of grazing is inappropriate on CRP acres. If you choose this option, be sure to reduce the number of inventory factors rated under #5, Habitat Value, before doing the division.

2) If the CRP will be under some type of vegetative management, you may substitute the following:

4.	Habitat Inventory	RATING
	b. Management or maintenance of permanent vegetative cover according to a prescribed plan that results in one of the following:	b: _____
	No more than 75% of the field is mowed in any one year. Mowing is done in strips. Mow alternate strips in second year. All mowing is done outside the critical nesting period of March 15 through July 15.	= 1.0
	The field edge/border remains unmowed. All mowing is done outside the critical nesting period from March 15 through July 15	= 0.9
	Total field is mowed outside of critical nesting period (March 15 through July 15).	= 0.7
	Please note, mowing during the critical nesting period is prohibited on CRP.	

Wildlife Habitat Evaluation Guide
WOODLAND HABITAT

Field No. _____

1. Landowner objectives:
2. Wildlife commonly found on this conservation treatment unit:
3. Soils potential for woodland habitat elements:

4. Habitat Inventory	RATING
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- | | |
|--------------------------|----------|
| a. Forest Ecosystem Type | a. _____ |
|--------------------------|----------|

Mature, uneven-aged stand, dominated by 2 or more tree species (includes, willow-cottonwood riparian areas, mixed species forests, and CTUs with ponderosa pine or aspen as the sole climax species). = 1.0

Uneven-aged stand dominated by 1 tree species or mixed species stands of any age (may include Douglas fir, gambel oak, etc.) = 0.5

Even-aged stand, dominated by 2 or more tree species (includes spruce-fir, high elevation alder-spruce riparian areas, and pinon-juniper) = 0.3

Even-aged stand dominated by 1 tree species (includes lodgepole pine, Douglas fir, and spruce-fir forests dominated by one species) = 0.2

Use best fitting category for forest types not listed or for combination forest types.

The spruce-fir complex includes subalpine fir, Engelmann spruce, limber pine and bristlecone pine.

(more)

Deduct 0.3 points for removal of shrubs or deciduous trees, improper grazing use and/or no grazing system, or herbicide application.

No rating <0.2 if forest present in any quantity.

b. Snags b. _____

More than 5 snags >12" dbh per acre = 1.0

From 2-5 snags >12" dbh and/or 5 or more snags 4-12" dbh = 0.5

From 2-5 snags 4-12" = 0.3

Dbh is tree diameter at 4.5 feet height.

c. Forest Size c. _____

Average size of forested block 50-120 acres = 1.0

Average size of forested block 20-49 or > 120 acres = 0.5

Average size of forested block < 20 acres = 0.3

If forested block is > 120 acres, evaluate item d, forest openings, also.

d. Forest Openings d. _____

Irregularly shaped openings with mixture of grasses, forbs and shrubs, no more than 500 feet across, occupying 6%-25% of area = 1.0

No openings, or openings meeting above criteria on 1-5% of area = 0.5

Openings meeting above criteria, larger than 500 feet across and/or occupying >25% of area = 0.3

Deduct 0.3 points for burning, pesticide use or other activities that reduce the amount or diversity of shrubs or herbaceous plants.

Deduct 0.5 points for removal of shrubs, improper grazing use or no grazing system.

(more)

No rating <0.2 if openings are present.

An opening is an area where the canopy is open if looking up.

e. Human Disturbance e. _____

Infrequently used private roads, 0 occupied dwellings in CTU, urban development at least 1 mile away = 1.0

Frequently used private roads, 1 occupied dwelling per CTU, within 1/2 mile of urban development = 0.5

CTU <40 acres, contains 2 or more occupied dwellings or frequently used roads, within 1/4 mile of urban development = 0.3

f. Wildlife Drinking Water f. _____

If perennial drinking water is present or developed to raise habitat value, rate as follows:

Average distance to water from any point on CTU <1/2 mile = 1.0

Average distance to water from any point on CTU from 1/2 to 1 mile = 0.5

Average distance to water from any point on CTU >1 to <2 miles = 0.3

Deduct 0.3 points for any grazing, cultivation, burning or pesticide use within 50 feet of drinking water source.

No rating <0.2 if average distance is <2 miles.

5. Habitat Value

Habitat value = $\frac{\text{Total Rating}}{\text{No. of inventory factors rated}}$ = _____

6. Habitat elements needing improvement and the soil potential for those elements:

7. Alternatives for improving deficient habitat elements: